

Table 83. Energy Consumption Estimates by Source, Selected Years 1960-1997, Hawaii

Year	Coal ^a	Natural Gas ^b	Petroleum											Nuclear Electric Power	Hydro-electric Power ^d		Net Interstate Flow of Electricity/Losses ^g	Total ^h	
			Asphalt & Road Oil ^a	Aviation Gasoline ^a	Distillate Fuel ^a	Jet Fuel ^a	Kerosene ^a	LPG ^a	Lubricants ^a	Motor Gasoline	Residual Fuel ^a	Other ^{a,c}	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels											Million kWh	Biomass ^e	Other ^{a,f}	Million kWh		
1960	0	0	29	2,640	886	4,321	91	112	38	3,429	4,766	553	16,864	0	27	-	0	-	
1965	0	0	306	613	1,612	7,618	49	219	94	4,082	7,230	684	22,507	0	105	-	0	-	
1970	0	0	377	133	1,695	14,273	153	938	71	5,691	10,154	643	34,129	0	108	-	0	-	
1975	0	0	379	116	1,948	14,849	76	872	104	6,766	11,255	693	37,056	0	89	-	0	-	
1980	0	3	285	199	5,987	14,116	9	1,573	94	7,231	13,196	815	43,505	0	86	-	0	-	
1985	46	2	308	155	4,611	13,260	2	133	86	7,594	13,185	671	40,005	0	86	-	0	-	
1986	16	2	272	279	4,584	10,176	3	126	84	7,878	14,326	1,203	38,931	0	78	-	0	-	
1987	63	3	397	249	4,059	11,481	2	157	95	8,186	13,595	1,468	39,688	0	82	-	0	-	
1988	50	3	351	281	5,914	11,972	(s)	178	91	8,476	16,935	1,921	46,122	0	81	-	0	-	
1989	32	3	296	287	5,685	13,239	(s)	186	94	8,754	17,400	2,004	47,944	0	i NA	-	0	-	
1990	28	3	381	272	6,822	12,646	(s)	178	96	8,670	17,433	2,156	48,655	0	NA	-	0	-	
1991	37	3	383	261	7,239	11,123	(s)	214	86	8,970	15,418	1,803	45,499	0	NA	-	0	-	
1992	47	3	431	243	5,588	9,993	(s)	651	88	8,870	16,271	2,230	44,365	0	NA	-	0	-	
1993	73	3	444	198	4,837	8,891	1	884	90	9,060	12,361	2,026	38,791	0	NA	-	0	-	
1994	86	3	407	210	5,063	9,472	1	1,619	94	9,343	12,931	2,221	41,361	0	NA	-	0	-	
1995	192	3	438	218	5,017	9,940	1	1,317	92	9,416	12,348	2,115	40,902	0	NA	-	0	-	
1996	169	3	401	165	4,418	10,087	1	1,354	89	9,374	10,379	2,501	38,769	0	NA	-	0	-	
1997	145	3	396	121	4,287	10,217	1	1,367	94	9,358	9,879	2,483	38,203	0	NA	-	0	-	
Trillion Btu																			
1960	0.0	0.0	0.2	13.3	5.2	23.5	0.5	0.4	0.2	18.0	30.0	3.3	94.7	0.0	0.3	0.0	0.0	95.0	
1965	0.0	0.0	2.0	3.1	9.4	42.3	0.3	0.9	0.6	21.4	45.5	4.1	129.5	0.0	1.1	R 0.2	0.0	R 130.8	
1970	0.0	0.0	2.5	0.7	9.9	80.1	0.9	3.5	0.4	29.9	63.8	3.9	195.5	0.0	1.1	R 0.4	0.0	R 197.1	
1975	0.0	0.0	2.5	0.6	11.3	83.5	0.4	3.2	0.6	35.5	70.8	4.2	212.7	0.0	0.9	R 0.6	0.0	R 214.2	
1980	0.0	3.0	1.9	1.0	34.9	79.2	0.1	5.8	0.6	38.0	83.0	4.9	249.3	0.0	0.9	R 11.9	0.0	R 265.1	
1985	1.1	2.7	2.0	0.8	26.9	74.4	(s)	0.5	0.5	39.9	82.9	4.2	232.1	0.0	0.9	R 14.2	0.4	R 251.4	
1986	0.4	2.7	1.8	1.4	26.7	57.0	(s)	0.5	0.5	41.4	90.1	7.6	226.9	0.0	0.8	R 6.7	0.4	R 237.9	
1987	1.6	2.8	2.6	1.3	23.6	64.4	(s)	0.6	0.6	43.0	85.5	9.0	230.6	0.0	0.9	R 6.7	0.3	R 242.8	
1988	1.2	2.8	2.3	1.4	34.5	67.2	(s)	0.7	0.6	44.5	106.5	11.7	269.3	0.0	0.8	R 7.0	0.3	R 281.5	
1989	0.8	2.9	2.0	1.4	33.1	74.4	(s)	0.7	0.6	46.0	109.4	12.1	279.6	0.0	R i 0.6	R i 12.0	R i 1.2	R i 297.1	
1990	0.7	3.0	2.5	1.4	39.7	71.1	(s)	0.6	0.6	45.5	109.6	13.0	284.0	0.0	0.6	R 10.9	0.9	R 300.1	
1991	0.9	2.9	2.5	1.3	42.2	62.6	(s)	0.8	0.5	47.1	96.9	11.0	264.9	0.0	0.5	R 6.6	1.2	R 277.0	
1992	1.2	2.9	2.9	1.2	32.6	56.5	(s)	2.4	0.5	46.6	102.3	13.4	258.3	0.0	0.6	R 6.4	1.2	R 270.5	
1993	1.8	2.8	2.9	1.0	28.2	50.4	(s)	3.2	0.5	47.6	77.7	12.3	223.8	0.0	0.6	R 6.5	4.5	R 240.1	
1994	1.8	2.9	2.7	1.1	29.5	53.7	(s)	5.9	0.6	49.1	81.3	13.4	237.2	0.0	1.5	R 8.7	5.2	R 257.4	
1995	4.1	2.9	2.9	1.1	29.2	56.4	(s)	4.8	0.6	49.5	77.6	12.8	234.8	0.0	1.0	R 8.2	6.3	R 257.4	
1996	3.6	2.8	2.7	0.8	25.7	57.2	(s)	4.9	0.5	49.2	65.3	15.0	221.4	0.0	1.1	R 8.3	6.6	R 243.9	
1997	3.3	2.7	2.6	0.6	25.0	57.9	(s)	4.9	0.6	49.2	62.1	14.9	217.8	0.0	1.2	7.9	6.6	0.0	239.5

^a The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

^b Includes supplemental gaseous fuels.

^c "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in Appendix A, Section 4, "Other Petroleum Products."

^d If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

^e "Biomass" is wood, waste, and ethanol. Ethanol blended into motor gasoline is included in motor gasoline and total petroleum. It is also included in the biomass series to give complete biomass data, but it is counted only once in the energy total.

^f "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.

^g Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number

indicates that more electricity (including associated losses) came into the State than went out of the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

^h From 1989, "Total" does not equal the sum of the columns. Ethanol (which is shown in the transportation sector table) is included in both motor gasoline and biomass data in this table but only once in the total. Net imports of electricity generated from nonrenewable energy sources (shown in appendix Table A8) is included in the total in this table but not in any other columns.

ⁱ There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of non-electric utility use of renewable energy beginning in 1989.

kWh=kilowatthours. R=Revised data. -=Not applicable. NA=Not available.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 84. Residential Energy Consumption Estimates, Selected Years 1960-1997, Hawaii

Year	Coal			Natural Gas ^b	Petroleum				Wood	Geothermal	Solar ^c	Electricity ^a	Net Energy	Electrical System Energy Losses ^d	
	Bituminous Coal and Lignite ^a	Anthracite ^a	Total		Distillate Fuel ^a	Kerosene ^a	LPG ^a	Total							
	Billion Cubic Feet			Thousand Barrels				Thousand Cords	Million Kilowatthours	Million Kilowatthours	Total				
1960	0	0	0	0	(s)	0	57	58	0	—	—	514	—	1,550	—
1965	0	0	0	0	1	0	113	114	0	—	—	861	—	1,976	—
1970	0	0	0	0	1	0	447	449	0	—	—	1,285	—	3,021	—
1975	0	0	0	0	1	0	320	321	0	—	—	1,663	—	3,732	—
1980	0	0	0	1	1	0	430	431	0	—	—	1,841	—	4,103	—
1985	0	0	0	1	(s)	0	101	101	0	—	—	1,879	—	3,928	—
1986	0	0	0	1	1	0	95	96	0	—	—	1,962	—	3,998	—
1987	0	0	0	1	1	0	119	120	0	—	—	2,073	—	4,304	—
1988	0	0	0	1	2	0	134	136	0	—	—	2,151	—	4,539	—
1989	0	0	0	1	(s)	0	139	140	0	—	—	2,242	—	4,834	—
1990	0	0	0	1	(s)	0	127	128	0	—	—	2,324	—	4,734	—
1991	0	0	0	1	(s)	(s)	131	131	0	—	—	2,396	—	R 4,132	—
1992	0	0	0	1	(s)	(s)	413	413	0	—	—	2,438	—	3,711	—
1993	0	0	0	1	1	(s)	88	89	0	—	—	2,469	—	3,061	—
1994	0	0	0	1	1	(s)	90	91	0	—	—	2,557	—	2,859	—
1995	0	0	0	1	1	(s)	86	88	0	—	—	2,606	—	2,923	—
1996	0	0	0	1	(s)	(s)	107	107	0	—	—	2,676	—	3,023	—
1997	0	0	0	1	(s)	(s)	107	107	0	—	—	2,668	—	2,927	—
Trillion Btu															
1960	0.0	0.0	0.0	0.0	(s)	0.0	0.2	0.2	0.0	0.0	0.0	1.8	2.0	5.3	7.3
1965	0.0	0.0	0.0	0.0	(s)	0.0	0.5	0.5	0.0	0.0	0.0	2.9	3.4	6.7	10.1
1970	0.0	0.0	0.0	0.0	(s)	0.0	1.7	1.7	0.0	0.0	0.0	4.4	6.1	10.3	16.4
1975	0.0	0.0	0.0	0.0	(s)	0.0	1.2	1.2	0.0	0.0	0.0	5.7	6.9	12.7	19.6
1980	0.0	0.0	0.0	1.4	(s)	0.0	1.6	1.6	0.0	0.0	0.0	6.3	9.2	14.0	23.2
1985	0.0	0.0	0.0	0.7	(s)	0.0	0.4	0.4	0.0	0.0	0.0	6.4	7.5	13.4	20.9
1986	0.0	0.0	0.0	0.6	(s)	0.0	0.3	0.4	0.0	0.0	0.0	6.7	7.7	13.6	21.3
1987	0.0	0.0	0.0	0.6	(s)	0.0	0.4	0.4	0.0	0.0	0.0	7.1	8.1	14.7	22.8
1988	0.0	0.0	0.0	0.6	(s)	0.0	0.5	0.5	0.0	0.0	0.0	7.3	8.4	15.5	23.9
1989	0.0	0.0	0.0	0.6	(s)	0.0	0.5	0.5	0.0	e 0.0	R e 0.7	7.7	R e 9.5	16.5	R e 26.0
1990	0.0	0.0	0.0	0.6	(s)	0.0	0.5	0.5	0.0	0.0	0.8	7.9	9.8	16.2	25.9
1991	0.0	0.0	0.0	0.6	(s)	(s)	0.5	0.5	0.0	0.0	0.8	8.2	10.1	14.1	24.2
1992	0.0	0.0	0.0	0.6	(s)	(s)	1.5	1.5	0.0	0.0	0.9	8.3	11.3	12.7	24.0
1993	0.0	0.0	0.0	0.6	(s)	(s)	0.3	0.3	0.0	0.0	0.9	8.4	10.3	10.4	20.7
1994	0.0	0.0	0.0	0.6	(s)	(s)	0.3	0.3	0.0	0.0	1.0	8.7	10.7	9.8	20.4
1995	0.0	0.0	0.0	0.6	(s)	(s)	0.3	0.3	0.0	0.0	1.1	8.9	10.9	10.0	20.8
1996	0.0	0.0	0.0	0.6	(s)	(s)	0.4	0.4	0.0	0.0	1.1	9.1	11.2	10.3	21.5
1997	0.0	0.0	0.0	0.5	(s)	(s)	0.4	0.4	0.0	0.0	1.2	9.1	11.2	10.0	21.2

^a The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

^b Includes supplemental gaseous fuels.

^c Includes small amounts of solar energy consumed by the commercial sector that cannot be separately identified. See Appendix A, Section 5, for explanation of estimation methodology.

^d Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

^e There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of

non-electric utility use of renewable energy beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 85. Commercial Energy Consumption Estimates, Selected Years 1960-1997, Hawaii

Year	Coal			Natural Gas ^b	Petroleum						Wood	Geothermal	Electricity ^a	Electrical System Energy Losses ^c	Total ^d	
	Bituminous Coal and Lignite ^a	Anthracite ^a	Total		Distillate Fuel ^a	Kerosene ^a	LPG ^a	Motor Gasoline	Residual Fuel ^a	Total						
	Thousand Short Tons			Billion Cubic Feet	Thousand Barrels						Thousand Cords	Million Kilowatthours	Net Energy	Million Kilowatthours		
1960	0	0	0	0	48	23	10	55	41	177	0	-	306	-	921	-
1965	0	0	0	0	71	39	20	59	31	220	0	-	495	-	1,136	-
1970	0	0	0	0	174	87	79	133	38	511	0	-	771	-	1,813	-
1975	0	0	0	0	84	45	57	98	15	299	0	-	1,109	-	2,489	-
1980	0	0	0	2	398	0	76	54	25	552	0	-	1,462	-	3,259	-
1985	0	0	0	2	136	1	18	47	21	223	NA	-	1,612	-	3,371	-
1986	0	0	0	2	181	3	17	46	67	313	NA	-	1,831	-	3,730	-
1987	0	0	0	2	483	2	21	44	53	604	NA	-	1,942	-	4,033	-
1988	0	0	0	2	604	(s)	24	53	1,762	2,443	NA	-	2,072	-	4,372	-
1989	0	0	0	2	495	(s)	25	52	1,470	2,042	NA	-	2,152	-	4,639	-
1990	0	0	0	2	507	(s)	22	59	837	1,426	NA	-	2,253	-	4,589	-
1991	0	0	0	2	613	(s)	23	49	19	703	NA	-	2,355	-	4,062	-
1992	0	0	0	2	437	(s)	73	45	1,063	1,618	NA	-	2,417	-	3,678	-
1993	0	0	0	2	279	1	15	11	35	341	0	-	2,419	-	3,000	-
1994	0	0	0	2	252	(s)	16	11	439	718	0	-	2,601	-	2,908	-
1995	0	0	0	2	253	(s)	15	11	63	343	0	-	2,779	-	3,116	-
1996	0	0	0	2	152	(s)	19	11	13	195	0	-	2,819	-	3,185	-
1997	0	0	0	2	308	(s)	19	11	11	350	0	-	2,839	-	3,114	-
Trillion Btu																
1960	0.0	0.0	0.0	0.0	0.3	0.1	(s)	0.3	0.3	1.0	0.0	0.0	1.0	2.0	3.1	5.2
1965	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.3	0.2	1.2	0.0	0.0	1.7	2.9	3.9	6.8
1970	0.0	0.0	0.0	0.0	1.0	0.5	0.3	0.7	0.2	2.7	0.0	0.0	2.6	5.4	6.2	11.6
1975	0.0	0.0	0.0	0.0	0.5	0.3	0.2	0.5	0.1	1.6	0.0	0.0	3.8	5.4	8.5	13.8
1980	0.0	0.0	0.0	1.7	2.3	0.0	0.3	0.3	0.2	3.0	0.0	0.0	5.0	9.7	11.1	20.8
1985	0.0	0.0	0.0	2.0	0.8	(s)	0.1	0.2	0.1	1.2	NA	0.0	5.5	8.8	11.5	20.3
1986	0.0	0.0	0.0	2.0	1.1	(s)	0.1	0.2	0.4	1.8	NA	0.0	6.2	10.1	12.7	22.8
1987	0.0	0.0	0.0	2.2	2.8	(s)	0.1	0.2	0.3	3.5	NA	0.0	6.6	12.3	13.8	26.0
1988	0.0	0.0	0.0	2.2	3.5	(s)	0.1	0.3	11.1	15.0	NA	0.0	7.1	24.2	14.9	39.2
1989	0.0	0.0	0.0	2.3	2.9	(s)	0.1	0.3	9.2	12.5	NA	0.0	7.3	22.1	15.8	38.0
1990	0.0	0.0	0.0	2.4	3.0	(s)	0.1	0.3	5.3	8.6	NA	0.0	7.7	18.7	15.7	34.3
1991	0.0	0.0	0.0	2.3	3.6	(s)	0.1	0.3	0.1	4.0	NA	0.0	8.0	14.4	13.9	28.2
1992	0.0	0.0	0.0	2.3	2.5	(s)	0.3	0.2	6.7	9.7	NA	0.0	8.2	20.3	12.6	32.8
1993	0.0	0.0	0.0	2.3	1.6	(s)	0.1	0.1	0.2	2.0	0.0	0.0	8.3	12.5	10.2	22.7
1994	0.0	0.0	0.0	2.3	1.5	(s)	0.1	0.1	2.8	4.3	0.0	0.0	8.9	15.5	9.9	25.4
1995	0.0	0.0	0.0	2.3	1.5	(s)	0.1	0.1	0.4	2.0	0.0	0.0	9.5	13.8	10.6	24.4
1996	0.0	0.0	0.0	2.3	0.9	(s)	0.1	0.1	0.1	1.1	0.0	0.0	9.6	13.0	10.9	23.8
1997	0.0	0.0	0.0	1.8	1.8	(s)	0.1	0.1	0.1	2.0	0.0	0.0	9.7	13.5	10.6	24.1

^a The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

^b Includes supplemental gaseous fuels.

^c Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

^d Small amounts of solar energy consumed in the commercial sector cannot be separately identified and are

included in residential consumption.

-=Not applicable. NA=Not available.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 86. Industrial Energy Consumption Estimates, Selected Years 1960-1997, Hawaii

Year	Coal	Natural Gas ^a	Petroleum										Hydro-electric Power ^b	Wood and Waste	Other ^{b,d}	Electricity ^b	Electrical System Energy Losses ^e	Total
			Asphalt and Road Oil ^b	Distillate Fuel ^b	Kerosene ^b	LPG ^b	Lubricants ^b	Motor Gasoline	Residual Fuel ^b	Other ^{b,c}	Total	Million kWh	Million kWh	Net Energy	Million kWh			
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels										NA	NA	NA	NA		
1960	0	0	29	554	68	43	18	83	1,038	553	2,386	0	-	-	465	-	1,403	-
1965	0	0	306	635	10	82	21	76	1,712	684	3,526	83	-	-	1,096	-	2,516	-
1970	0	0	377	701	66	386	4	49	1,671	643	3,898	86	-	-	1,720	-	4,044	-
1975	0	0	379	603	31	472	30	53	1,346	693	3,607	71	-	-	2,538	-	5,696	-
1980	0	0	285	1,369	9	1,041	20	49	1,491	815	5,078	67	-	-	3,028	-	6,749	-
1985	46	0	308	471	(s)	9	18	104	1,344	671	2,925	67	-	-	3,143	-	6,571	-
1986	16	0	272	541	(s)	9	18	101	1,952	1,203	4,096	67	-	-	3,239	-	6,601	-
1987	63	0	397	776	(s)	11	20	108	1,332	1,468	4,113	67	-	-	3,284	-	6,820	-
1988	50	0	351	768	(s)	12	19	110	1,768	1,921	4,951	67	-	-	3,495	-	7,375	-
1989	32	0	296	514	(s)	13	20	129	1,439	2,004	4,414	f NA	-	-	3,576	-	7,709	-
1990	28	0	381	812	(s)	15	20	133	1,765	2,156	5,283	NA	-	-	3,734	-	7,605	-
1991	37	0	383	692	(s)	46	18	150	1,804	1,803	4,896	NA	-	-	3,773	-	6,507	-
1992	47	0	431	602	(s)	130	18	152	1,372	2,230	4,934	NA	-	-	3,811	-	5,800	-
1993	73	0	444	451	(s)	772	19	241	1,070	2,026	5,023	NA	-	-	3,770	-	4,675	-
1994	86	0	407	349	(s)	1,499	20	245	1,202	2,221	5,943	NA	-	-	3,791	-	4,238	-
1995	192	0	438	405	(s)	1,207	19	245	1,040	2,115	5,470	NA	-	-	3,803	-	4,265	-
1996	169	0	401	324	(s)	1,226	19	259	973	2,501	5,702	NA	-	-	3,884	-	4,388	-
1997	145	(s)	396	489	(s)	1,239	20	242	862	2,483	5,733	NA	-	-	3,856	-	4,231	-
Trillion Btu																		
1960	0.0	0.0	0.2	3.2	0.4	0.2	0.1	0.4	6.5	3.3	14.4	0.0	0.0	0.0	1.6	16.0	4.8	20.7
1965	0.0	0.0	2.0	3.7	0.1	0.3	0.1	0.4	10.8	4.1	21.5	0.9	R 0.2	0.0	3.7	R 26.3	8.6	R 34.9
1970	0.0	0.0	2.5	4.1	0.4	1.5	(s)	0.3	10.5	3.9	23.1	0.9	R 0.2	0.0	5.9	R 30.0	13.8	R 43.8
1975	0.0	0.0	2.5	3.5	0.2	1.8	0.2	0.3	8.5	4.2	21.0	0.7	R 0.3	0.0	8.7	R 30.7	19.4	R 50.2
1980	0.0	0.0	1.9	8.0	0.1	3.8	0.1	0.3	9.4	4.9	28.4	0.7	R 11.9	0.0	10.3	R 51.3	23.0	R 74.3
1985	1.1	0.0	2.0	2.7	(s)	(s)	0.1	0.5	8.4	4.2	18.1	0.7	R 13.9	0.0	10.7	R 44.6	22.4	R 67.0
1986	0.4	0.0	1.8	3.1	(s)	(s)	0.1	0.5	12.3	7.6	25.5	0.7	R 6.7	0.0	11.1	R 44.4	22.5	R 66.9
1987	1.6	0.0	2.6	4.5	(s)	(s)	0.1	0.6	8.4	9.0	25.3	0.7	R 6.7	0.0	11.2	R 45.5	23.3	R 68.7
1988	1.2	0.0	2.3	4.5	(s)	(s)	0.1	0.6	11.1	11.7	30.3	0.7	R 7.0	0.0	11.9	R 51.2	25.2	R 76.3
1989	0.8	0.0	2.0	3.0	(s)	(s)	0.1	0.7	9.0	12.1	26.9	R f 0.4	R f 11.8	R f 0.2	12.2	R f 52.3	26.3	R f 78.6
1990	0.7	0.0	2.5	4.7	(s)	0.1	0.1	0.7	11.1	13.0	32.2	0.4	R 10.8	0.1	12.7	R 57.0	25.9	R 82.9
1991	0.9	0.0	2.5	4.0	(s)	0.2	0.1	0.8	11.3	11.0	30.0	0.3	R 6.6	0.3	12.9	R 51.0	22.2	R 73.2
1992	1.2	0.0	2.9	3.5	(s)	0.5	0.1	0.8	8.6	13.4	29.7	0.5	R 6.4	0.3	13.0	R 51.1	19.8	R 70.9
1993	1.8	0.0	2.9	2.6	(s)	2.8	0.1	1.3	6.7	12.3	28.7	0.4	R 6.5	3.5	12.9	R 53.9	16.0	R 69.9
1994	1.8	0.0	2.7	2.0	(s)	5.5	0.1	1.3	7.6	13.4	32.5	1.3	R 8.7	4.2	12.9	R 61.5	14.5	R 76.0
1995	4.1	0.0	2.9	2.4	(s)	4.4	0.1	1.3	6.5	12.8	30.4	R 0.9	R 8.2	5.3	13.0	R 61.8	14.6	R 76.4
1996	3.6	0.0	2.7	1.9	(s)	4.4	0.1	1.4	6.1	15.0	31.6	0.9	R 8.3	5.5	13.3	R 63.2	15.0	R 78.2
1997	3.3	0.4	2.6	2.9	(s)	4.5	0.1	1.3	5.4	14.9	31.7	1.0	7.9	5.5	13.2	62.8	14.4	77.3

^a Includes supplemental gaseous fuels.^b The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.^c "Other" is the subtotal of 16 petroleum products. See a full description in Appendix A, Section 4, "Other Petroleum Products."^d "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Appendix A, Section 5, for explanation of estimation methodology.^e Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.^f There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of non-electric utility use of renewable energy beginning in 1989.

R=Revised data.

kWh=kilowatthours. -=Not applicable. NA=Not available.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 87. Transportation Energy Consumption Estimates, Selected Years 1960-1997, Hawaii

Year	Coal ^a	Natural Gas ^b	Petroleum									Ethanol ^c	Electricity ^a	Net Energy	Electrical System Energy Losses ^d	Total ^c	
			Aviation Gasoline ^a	Distillate Fuel ^a	Jet Fuel ^a	LPG ^a	Lubricants ^a	Motor Gasoline	Residual Fuel ^a	Total							
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Gallons	Million Kilowatthours	Million Kilowatthours	Million Kilowatthours	Million Kilowatthours		
1960	0	0	2,640	247	4,321	2	19	3,290	968	11,487	0	0	—	0	0	—	
1965	0	0	613	844	7,618	4	73	3,947	1,195	14,294	0	0	—	0	0	—	
1970	0	0	133	722	14,273	26	68	5,508	1,744	22,473	0	0	—	0	0	—	
1975	0	0	116	831	14,849	22	74	6,615	1,013	23,520	0	0	—	0	0	—	
1980	0	0	199	3,331	14,116	26	74	7,129	1,441	26,317	0	0	—	0	0	—	
1985	0	0	155	3,253	13,260	6	68	7,443	1,526	25,710	0	0	—	0	0	—	
1986	0	0	279	3,038	10,176	5	66	7,730	1,557	22,851	0	0	—	0	0	—	
1987	0	0	249	1,729	11,481	6	75	8,033	1,082	22,655	0	0	—	0	0	—	
1988	0	0	281	3,267	11,972	9	72	8,313	1,634	25,548	0	0	—	0	0	—	
1989	0	0	287	3,279	13,239	9	74	8,574	2,235	27,697	^e 0	0	—	0	0	—	
1990	0	0	272	3,870	12,646	13	76	8,477	2,694	28,049	0	0	—	0	0	—	
1991	0	0	261	4,224	11,123	14	68	8,771	2,609	27,072	0	0	—	0	0	—	
1992	0	0	243	2,597	9,993	35	69	8,674	3,799	25,410	0	0	—	0	0	—	
1993	0	0	198	2,017	8,891	9	71	8,808	2,689	22,682	0	0	—	0	0	—	
1994	0	0	210	2,362	9,472	14	74	9,088	2,980	24,201	0	0	—	0	0	—	
1995	0	0	218	2,171	9,940	8	73	9,160	2,719	24,289	0	0	—	0	0	—	
1996	0	0	165	1,641	10,087	2	71	9,104	714	21,784	0	0	—	0	0	—	
1997	0	0	121	1,203	10,217	2	75	9,104	500	21,221	0	0	—	0	0	—	
Trillion Btu																	
1960	0.0	0.0	13.3	1.4	23.5	(s)	0.1	17.3	6.1	61.8	0.0	0.0	61.8	0.0	0.0	61.8	
1965	0.0	0.0	3.1	4.9	42.3	(s)	0.4	20.7	7.5	79.0	0.0	0.0	79.0	0.0	0.0	79.0	
1970	0.0	0.0	0.7	4.2	80.1	0.1	0.4	28.9	11.0	125.3	0.0	0.0	125.3	0.0	0.0	125.3	
1975	0.0	0.0	0.6	4.8	83.5	0.1	0.5	34.7	6.4	130.5	0.0	0.0	130.5	0.0	0.0	130.5	
1980	0.0	0.0	1.0	19.4	79.2	0.1	0.5	37.4	9.1	146.7	0.0	0.0	146.7	0.0	0.0	146.7	
1985	0.0	0.0	0.8	18.9	74.4	(s)	0.4	39.1	9.6	143.3	0.0	0.0	143.3	0.0	0.0	143.3	
1986	0.0	0.0	1.4	17.7	57.0	(s)	0.4	40.6	9.8	126.9	0.0	0.0	126.9	0.0	0.0	126.9	
1987	0.0	0.0	1.3	10.1	64.4	(s)	0.5	42.2	6.8	125.2	0.0	0.0	125.2	0.0	0.0	125.2	
1988	0.0	0.0	1.4	19.0	67.2	(s)	0.4	43.7	10.3	142.0	0.0	0.0	142.0	0.0	0.0	142.0	
1989	0.0	0.0	1.4	19.1	74.4	(s)	0.4	45.0	14.1	154.5	^e 0	0.0	154.5	0.0	0.0	154.5	
1990	0.0	0.0	1.4	22.5	71.1	(s)	0.5	44.5	16.9	156.9	0.0	0.0	156.9	0.0	0.0	156.9	
1991	0.0	0.0	1.3	24.6	62.6	(s)	0.4	46.1	16.4	151.4	0.0	0.0	151.4	0.0	0.0	151.4	
1992	0.0	0.0	1.2	15.1	56.5	0.1	0.4	45.6	23.9	142.9	0.0	0.0	142.9	0.0	0.0	142.9	
1993	0.0	0.0	1.0	11.7	50.4	(s)	0.4	46.3	16.9	126.8	0.0	0.0	126.8	0.0	0.0	126.8	
1994	0.0	0.0	1.1	13.8	53.7	0.1	0.4	47.7	18.7	135.5	0.0	0.0	135.5	0.0	0.0	135.5	
1995	0.0	0.0	1.1	12.6	56.4	(s)	0.4	48.1	17.1	135.8	0.0	0.0	135.8	0.0	0.0	135.8	
1996	0.0	0.0	0.8	9.6	57.2	(s)	0.4	47.8	4.5	120.3	0.0	0.0	120.3	0.0	0.0	120.3	
1997	0.0	0.0	0.6	7.0	57.9	(s)	0.5	47.8	3.1	117.0	0.0	0.0	117.0	0.0	0.0	117.0	

^a The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.

^b Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

^c Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

^d Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

^e There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of non-electric utility use of renewable energy beginning in 1989.

—Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.

Table 88. Estimates of Energy Input at Electric Utilities, Selected Years 1960-1997, Hawaii

Year	Coal			Natural Gas ^a	Petroleum				Nuclear Electric Power	Hydroelectric Power ^e	Wood and Waste	Geothermal Energy	Other ^{b,f}	Total ^g
	Bituminous Coal and Lignite	Anthracite	Total		Heavy Oil ^{b,c}	Light Oil ^{b,d}	Petroleum Coke ^b	Total						
				Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	0	0	0	0	2,719	37	0	2,756	0	27	0	0	0	0
1965	0	0	0	0	4,292	61	0	4,353	0	22	0	0	0	0
1970	0	0	0	0	6,702	96	0	6,798	0	22	24	0	0	0
1975	0	0	0	0	8,880	429	0	9,309	0	18	25	0	0	0
1980	0	0	0	0	10,239	888	0	11,127	0	20	0	0	0	0
1985	0	0	0	0	10,295	752	0	11,047	0	19	25	19	0	0
1986	0	0	0	0	10,751	824	0	11,575	0	12	0	18	0	0
1987	0	0	0	0	11,127	1,069	0	12,196	0	15	0	13	0	0
1988	0	0	0	0	11,771	1,274	0	13,044	0	14	0	16	0	0
1989	0	0	0	0	12,255	1,396	0	13,651	0	22	11	14	0	0
1990	0	0	0	0	12,138	1,632	0	13,769	0	23	6	0	0	0
1991	0	0	0	0	10,986	1,710	0	12,696	0	20	0	0	0	0
1992	0	0	0	0	10,037	1,952	0	11,989	0	10	0	0	0	0
1993	0	0	0	0	8,568	2,088	0	10,656	0	14	0	0	0	0
1994	0	0	0	0	8,310	2,100	0	10,409	0	19	0	0	0	0
1995	0	0	0	0	8,525	2,187	0	10,713	0	16	0	0	0	0
1996	0	0	0	0	8,679	2,301	0	10,980	0	18	0	0	0	0
1997	0	0	0	0	8,507	2,286	0	10,793	0	19	0	0	0	0
Trillion Btu														
1960	0.0	0.0	0.0	0.0	17.1	0.2	0.0	17.3	0.0	0.3	0.0	0.0	0.0	17.6
1965	0.0	0.0	0.0	0.0	27.0	0.4	0.0	27.3	0.0	0.2	0.0	0.0	0.0	27.6
1970	0.0	0.0	0.0	0.0	42.1	0.6	0.0	42.7	0.0	0.2	0.3	0.0	0.0	43.2
1975	0.0	0.0	0.0	0.0	55.8	2.5	0.0	58.3	0.0	0.2	0.3	0.0	0.0	58.8
1980	0.0	0.0	0.0	0.0	64.4	5.2	0.0	69.5	0.0	0.2	0.0	0.0	0.0	69.7
1985	0.0	0.0	0.0	0.0	64.7	4.4	0.0	69.1	0.0	0.2	0.3	0.4	0.0	70.0
1986	0.0	0.0	0.0	0.0	67.6	4.8	0.0	72.4	0.0	0.1	0.0	0.4	0.0	72.9
1987	0.0	0.0	0.0	0.0	70.0	6.2	0.0	76.2	0.0	0.2	0.0	0.3	0.0	76.6
1988	0.0	0.0	0.0	0.0	74.0	7.4	0.0	81.4	0.0	0.1	0.0	0.3	0.0	81.9
1989	0.0	0.0	0.0	0.0	77.0	8.1	0.0	85.2	0.0	0.2	0.1	0.3	0.0	85.8
1990	0.0	0.0	0.0	0.0	76.3	9.5	0.0	85.8	0.0	0.2	0.1	0.0	0.0	86.1
1991	0.0	0.0	0.0	0.0	69.1	10.0	0.0	79.0	0.0	0.2	0.0	0.0	0.0	79.2
1992	0.0	0.0	0.0	0.0	63.1	11.4	0.0	74.5	0.0	0.1	0.0	0.0	0.0	74.6
1993	0.0	0.0	0.0	0.0	53.9	12.2	0.0	66.0	0.0	0.1	0.0	0.0	0.0	66.2
1994	0.0	0.0	0.0	0.0	52.2	12.2	0.0	64.5	0.0	0.2	0.0	0.0	0.0	64.7
1995	0.0	0.0	0.0	0.0	53.6	12.7	0.0	66.3	0.0	0.2	0.0	0.0	0.0	66.5
1996	0.0	0.0	0.0	0.0	54.6	13.4	0.0	68.0	0.0	0.2	0.0	0.0	0.0	68.2
1997	0.0	0.0	0.0	0.0	53.5	13.3	0.0	66.8	0.0	0.2	0.0	0.0	0.0	67.0

^a Includes supplemental gaseous fuels.^b The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the "Additional Notes" under each type of energy in Appendix A.^c Prior to 1980, based on oil used in steam plants. Since 1980, heavy oil includes fuel oil nos. 4, 5, and 6 and residual fuel oils.^d Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, light oil includes fuel oil nos. 1 and 2, kerosene, and jet fuel.^e If applicable, through 1989, includes all net imports of electricity, and, from 1990, includes only the portion of^f "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.^g If applicable, from 1990, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in appendix Table A8.

=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the appendices to this report.